

REPRINT OF CBD ANNOUNCEMENT

PART: U.S. GOVERNMENT PROCUREMENTS

SUBPART: SERVICES

CLASSCOD: A--Research and Development

OFFADD: R&D Contracting Directorate, Bldg 167, 2310 8th, WPAFB, OH
45433-7801

SUBJECT: Metals Affordability Initiative

DUE DATE: See Description Below

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DESCRIPTION: Introduction: Air Force Research Laboratory, Materials and Manufacturing Directorate (AFRL/ML), announces solicitation #2 under the Core Metals Affordability Initiative ("Core MAI"), Agreement Number F33615-99-2-5215. This Initiative is a joint effort of the Air Force Research Laboratory's Materials and Manufacturing Directorate and a Consortium made up of raw material producers, component suppliers, designers, assemblers, and original equipment manufacturers, currently: The Boeing Company, Brush-Wellman, Dynamet, Honeywell (formerly AlliedSignal), Ladish Co. Inc., Howmet, Oremet-Wah Chang, Lockheed Martin, Northrop-Grumman, Rolls-Royce Corp. , General Electric Aircraft Engines, and Pratt & Whitney.

Presently Pratt & Whitney is the fiduciary agent or lead company ("Recipient") for the Consortium and staffs a Program Office to support the Consortium. It is noted that as a Technology Investment Agreement ("TIA), this Award is not subject to the requirements of the Federal Acquisitions Regulations ("FAR"). The TIA and its attached documents, the Collaboration Agreement detailing the modus operandi of the Consortium, and all documents and procedures referenced herein may be obtained by contacting the MAI Program Office (Not from the AF POC listed above). (Please see all the corresponding names, postal and electronic addresses, telephone and facsimile numbers in Section F of this document.)

The Core MAI Initiative is structured to facilitate the conduct of projects based upon the submittal and selection of White Papers setting forth projects that will further the goals stated herein. The Materials Affordability Initiative Consortium (MAIC), in conjunction with AFRL/ML, is interested in receiving proposals ("White Papers") on the

technical efforts ("Projects") described below. White Papers in response to this announcement shall be sent to the MAI Program Office at Pratt & Whitney, East Hartford, CT. (See Section F of this document for the Points of Contact and corresponding addresses). White Papers shall be submitted for receipt on or before 1600 Hours local (East Hartford) time December 04, 2000, if the offeror wishes to have his/her White Paper considered for funding at the expected Technical Oversight Committee ("TOC") meeting to be held in mid-January 2001. Offerors who wish to submit White Papers after December 04, 2000, can do so 4 (four) months prior to the proposed start date of the project (with no end date of a project proposed to go past the completion date of the Core MAI Cooperative Agreement which is currently September 30, 2004). However, because of uncertainty of funding, it is not known when the TOC committee will again meet to review and evaluate White Papers. No other solicitation is anticipated in regard to this requirement; but you are advised to monitor the Wright Research Site Contracting Office Home Page: <http://www.wrs.afrl.af.mil/contract/>. You are further advised to continue to monitor the CBD for adjustments and updates, including possible changes in the performance period for which White Papers Projects may apply.

Potential submitters are put on notice that if an offeror is not a consortium member at the time a White Paper is submitted, it must be designated by the Air Force as a consortium member in accordance with the Government's established and objective criteria and procedures and must sign the Collaboration Agreement between the consortium members, or team with a Consortium Member before its White Paper may be evaluated for funding in accordance with the process described in the Proposal Evaluation Process (PEP) document. New consortium members will participate with existing consortium members on the TOC in the evaluation and scoring of White Papers as described in the PEP. All White Papers received in response to the solicitation will be submitted to the MAI Program Office which, in turn (and, if the offeror is not currently a member of the Consortium), after (1) notification by the Air Force that the offeror has been admitted as a new Consortium Member under the relevant objective criteria and (2) the offeror has signed the Collaboration agreement), will forward copies to each member of the Technical Oversight Committee ("TOC") at least three (3) weeks prior to the collective TOC evaluation .

B--REQUIREMENTS:

(1) Technical Description: The Metals Affordability Initiative Consortium (MAIC) and AFRL/ML have started a major new initiative, the Metals Affordability Initiative (MAI), aimed at reducing airframe,

space vehicle and aeropropulsion metallic component costs by 50% while also developing a more robust and responsive metals supplier base. The focus of the initiative is to improve the affordability of metallic components that make up the majority of current as well as future airframe, space vehicle and propulsion systems. The goal of the initiative is to develop and demonstrate affordable metallic materials and processes and accelerate their implementation in aerospace applications. The MAIC has identified eight key technical challenges, which are, in order of priority: (1) Efficient Manufacturing Processes (2) Collaborative Design and Manufacturing, (3) Part Count Reduction, (4) Improved Yield, (5) Low Cost Metals, (6) Reduced Time to Market (7) Reduced Inspection Steps and (8) Reduced Maintenance Actions. This announcement is published to invite interested participants from the metals community to submit White Papers that focus on but are not limited to the technical challenges listed above.

A description of each of the technical challenges is provided below:

Efficient Manufacturing Processes

Efficient manufacturing processes have a major impact in reducing the cost of the product as well as manufacturing cycle time. Such processes can improve material utilization, reduce processing costs, provide improved yield through process robustness and improved inspection techniques. Programs to develop efficient manufacturing processes should include evaluation and new or improved processing techniques such as advanced casting, forming, joining and machining processes, and inspection techniques. These processes should consider the entire supply chain including production of input materials. Process modeling including processing /microstructure/ property relationship should insure design of an efficient manufacturing process with minimum defects and improved quality. An integrated design and manufacturing approach requiring utilization of all disciplines is encouraged. Electronic/seamless transfer of information may be developed to reduce cycle time as well as develop inspection tools.

Collaborative Design and Manufacturing

Until recently the cost of weapon systems, their assemblies, and components were secondary to performance considerations. During the industry downturn, businesses engaged in the supply and manufacture of aircraft hardware found themselves in a unique position of aggressively attacking affordability as the number one criteria of the customer

while still providing high quality components. Aircraft hardware suppliers have already made significant improvements by reducing inventory and eliminating waste in their processes and have continuous improvement initiatives to continue to challenge processes and procedures to eliminate waste, improve quality, and reduce cycle times. The objective of this focal area is to foster electronic collaboration and integration of industry sectors (e.g., the casting sector would include Original Equipment Manufacturers (OEMs)/casting suppliers/sub-tier suppliers such as tool vendors) to address high impact areas which will significantly reduce the development/production cycle time and end item acquisition costs of metallic structures. Areas of interest include electronic data utilization, electronic product definition, design for manufacturing/ assembly/cost /sustainability /reliability, quality assurance procedures (e.g. standardization of specifications and inspection procedures), and manufacturing engineering relating to the planning, formulation and implementation of the 'paperless' enterprise design/ manufacturing/ customer team.

Part Count Reduction

Innovative designs, fabrication, and assembly concepts are being sought that will reduce the part counts and cost of metallic airframe and engine structures. These concepts may integrate numerous small detail parts into one cast, forged, laser formed, or roll-formed part/sub-component. In addition, these concepts may also integrate several parts/sub-components into one fastened, bonded, welded, or brazed assembly/component. Innovative design, fabrication, and procurement practices are also being sought to reduce total OEM/Supplier chain time-to-market, cycle-time and acquisition costs (both non-recurring and recurring).

Technical approaches may include Design for Manufacturing, Unitizing Processes, Integrated Design and Manufacturing, Advanced Casting Processes, Advanced Machining, Advanced Forming Processes, Advanced Joining Processes, and Rapid Prototyping and Tooling and/or other processes and technologies that will achieve MAI Program objectives and payoffs. Design for Manufacturing may include innovative, vertical and horizontal multi-disciplinary IPT company design approaches, and process modeling. Unitizing Processes may include lower cost casting, preform/forging, laser forming, and roll-forming processes and practices that will reduce span times and costs.

Integrated Design and Manufacturing may include electronic product definition, seamless transfer of design, engineering, and procurement data, over the entire OEM/supplier chain. Advanced Casting Processes may include re-useable mold casting, metal mold casting, modeling and simulation, continuous casting, and improved in-situ casting sensors and controls. Advanced Machining may include ECM, EDM, water jet, and laser cutting; high speed machining, modeling and simulation for residual stress/warp reduction; and machine tool development. Advanced Forming Processes may include roll forming, spray forming, laser forming, advanced extrusion, modeling and simulation, and improved sensors and controls. Advanced Joining Processes may include new arc-welding and solid state welding processes, dissimilar metal joining, brazing, and bonding processes and practices that reduce span times and cost. Rapid Prototyping and Tooling may include tool-less production, rapid tooling fabrication and assembly, and first article scrap reduction and acceptance.

Improved Yield

The manufacture of metallic aerospace components involves numerous specialty metals and processes. Within this wide range of metals, processes and applications, it is important for the reduction of component costs to maximize the yield of all manufacturing steps. Improved yield can result from reduced processing scrap, methods to minimize subsequent metal removal (i.e., near-net processing), or metals/processes that result in a high degree of value-added metal utilization in subsequent processes or applications. Yield improvement concepts may involve design for manufacturing or concurrent engineering methods for reduced input metal requirements, while conforming to stringent inspection demands or process capabilities. Example approaches for improved yield may include, but are not limited to reduced buy-to-fly ratios and near-net processing.

New processes or improvements to existing processes are to be considered for the overall improvement of manufacturing process yields. These processes may include, but are not limited to, advanced forming and casting methods. Programs that develop and utilize processing/microstructure/property relationship models and other analytical tools to develop optimal processing routes would be beneficial. Metals and processes that are clean and do not introduce deleterious features or defects for subsequent operations or

applications are also of interest for improved yield in metallic components.

Low Cost Metals

Studies have shown that the metal cost for a component used in a turbine engine or airframe may comprise up to 50% of the total component cost. Processes and alloys that can reduce the metals percentage cost for a component will have a major impact on the choice of a metal/alloy that will be considered by the designer.

Opportunities for reducing the cost of a component are present at all stages of the metals supply chain, from the raw materials stage through to the product used by the OEM. At each stage the value added for each processing step will determine the final cost to the end user. Cost reduction may be brought about by, for example, a reduction in the number of processing steps or the conservative use of a metal, such as near net shape processing. The challenge is to identify the causes of inefficiencies in the processing and use of metals and to develop alternate procedures to overcome them.

Possible approaches to meeting the low cost metals challenge include clean alloys/processes, standardized specifications, new alloys that will meet performance and cost needs, advances in the metal extraction, and mill processes that will provide lower cost metals and alloys. Advanced forming and casting processes can also impact the cost of materials used in turbine engines and airframes. Consideration in such approaches should be given to modeling and simulation.

Reduced Time to Market

Reduced time to market can have a significant impact on the cost of metals, starting with the metals producer and extending through the OEM. Programs to impact reduced time to market should emphasize integrated design and manufacturing concepts. Ideas that lead to improved approaches to design through multidisciplinary engineering and integrated product teams are preferable. Also of interest are methodologies to improve supply chain management such as electronic product definitions, the seamless transfer of data and information, and standardized industry specifications. For example, a program might focus on industry best practices with reference to common specifications and standards for materials and processes and the

optimum way to develop, verify, and communicate such across the industry.

Critical to reducing product development time with reduced risk to technology transition are design practices that consider the entire product life cycle, that is design for manufacturing, affordability, and sustainability. Design models that incorporate such life cycle factors and emphasize maintainability, reparability and cost are of significant interest.

Rapid prototyping processes that reduce the iterative development cycle are also of interest in reducing time to market. Programs in this area might emphasize such technologies as rapid manufacture of tooling or toolless component production. Programs which reduce the time for prototype evaluation and speed first article acceptance will also be considered. Other possible areas of emphasis for programs include advanced casting and forming processes that specifically impact the duration of the product development cycle.

Reduced Inspection Steps

Inspection of materials, parts, components and assemblies are a major part of quality assurance programs for aerospace systems. In total, these inspections have a significant effect on the lead-time between order receipt and delivery of an integrated metallic system. Programs are sought that, if successful, will reduce the number of necessary inspections, reduce the process flow time consumed by inspections or reduce costs of inspection. Also to be considered are programs that will allow the relocation of certain inspections in the overall manufacturing flow in such a way as to reduce materials consumption or reduce cost of manufacturing.

Critical to reducing the time and cost impact due to inspections is the requirement to avoid an unfavorable impact on system safety or component performance or reliability. It is known that metal structures undergo numerous inspections for integrity, manufacturing induced damage, and clearly, systems in operation need similar assessments of damage. Potentially, programs that consider design and manufacturing parts, components and systems which lend themselves to low cost or rapid inspection or even elimination of the need for inspection will have a favorable impact on the goals of affordable metal structures. Additionally, materials and parts manufacturing may

integrate inspection requirements to eliminate redundancy even with an initial cost bogie that pays off greatly downstream.

Programs relevant to this technical challenge are to consider, but not be limited to, methods of inspection, manufacturing schemes and designs that reduce inspection requirements, materials that offer greater inspection sensitivity and materials which, due to manufacturing methods employed, need no inspection.

Reduced Maintenance Actions

Reduction of maintenance actions has a significant affect on the overall life cycle cost of aircraft systems. Studies have shown that nearly 50% of life cycle costs for an aircraft are related to operation and support (O&S) requirements. Most of the O & S costs can be attributed to personnel and materials associated with maintenance, spares production, inventory, and inspection of aircraft. Projects that lead to elimination or reduction of maintenance actions are being sought by the Metals Affordability Initiative Consortium. Project topics that have been identified as directly addressing this technical challenge include 1) Advanced Characterization & Inspection Techniques, 2) Design for Manufacturing, Assembly, Cost, Inspection, and Supportability, 3) Unitized Processes, 4) Integrated Design & Manufacturing, and 5) Clean Alloys & Processes. By developing technologies in these areas, aircraft and engine affordability goals will be reached through reduced support requirements due to more robust inspection procedures, fewer parts, reduced inventory requirements, and more durable and corrosion resistant components that require fewer inspection intervals.

(2) Deliverable Items:

The following deliverable data items shall be required:

- A. Quarterly Technical Status Reports. On or before ninety (90) calendar days following the award date of each funded White Paper, and quarterly thereafter, except for those Quarters when the Annual Report (see para. C below) is due, and throughout the term of the Project, each project team (AIPT) shall submit directly to the Government Program Manager two Quarterly Technical Status Reports detailing for each Project the technical progress to date and reporting on all problems, technical issues, or major developments during the reporting period. One Quarterly Technical Status Report

may include confidential and proprietary information, whereas the second Quarterly Technical Status Report will include only a high level description of program goals, milestones, metrics and activity/status of the program, i.e., it will be considered a version suitable for public release. Both Reports will be submitted directly to the Government Program Manager, but only the second Report will be available for public release at the discretion of the Government Program Manager.

B. Business Status Report. On or before ninety (90) calendar days following the effective award date of a Project, and quarterly thereafter throughout the term of this Project, each Project team (AIPT) will submit to the Program Business Integrator (PBI), a Quarterly Business Status Report providing summarized details of the resource status, including the status of the contributions by each of the Consortium Members and the Government. The PBI, in turn, will compile and submit all the AIPT Reports to the Grants Officer, with a copy to the Government Program Manager.

C. Annual Technical Report : On or before one year after the effective award date of each funded Project, and annually thereafter, each project team shall submit an Annual Technical Report summarizing the activities of each Project for the preceding year. The Annual Report shall be submitted to the Government Program Manager, with a copy to the Grants Officer. The Annual Report shall be camera ready and not contain confidential and proprietary information, so that it may be released to the public.

D. Final Report : Within sixty (60) calendar days of completion or termination of any funded Project, the Recipient shall submit a Final Report consisting of two parts, one addressing the technical achievements and the second recapping the business/financial aspects of all awarded White Papers. The technical portion of the report should be suitable for publication and is to provide a recap of the Program, discussing Program accomplishments. With the approval of the Government Program manager, reprints of published articles may be submitted or attached to the technical portion of the Final Report. The business portion of the report shall contain a separate discussion of total costs incurred, total costs contributed by each Consortium Member with

an explanation for any deviations from the original business plan. The final report will be camera ready and not contain confidential and proprietary information, so that it may be released to the public.

(3) Security Requirements: It is not anticipated that work performed on this effort will require access to classified material.

(4) Other Special Requirements: The International Traffic in Arms Regulation and Public Law 98-94 are applicable to this project. Pursuant to PL 98-94, offerors are required to either prepare a DD Form 2345, Militarily Critical Technical Data Agreement and forward the DD Form 2345 , along with any attachments, to: United States/Canada Joint Certification Office, Defense Logistics Services Center, Federal Center, Battle Creek, Michigan, USA, 49017-3084, or provide evidence that registration and certification under the program is already on file. Copies of the DD Form 2345 may be obtained from the contracting point of contact stated herein.

C--ADDITIONAL INFORMATION: (1) Anticipated Period of Performance: The total length of the technical effort including reporting shall be such that the end date of the Core MAI is not exceeded. The end date is currently September 30, 2004. However, offerors must be aware that continuing uninterrupted funding is dependent upon the successful progress of the Project, as determined by the Consortium TOC through a periodic Stage/Gate review. (See Section D for additional details).

(2) Expected Award Date for White Papers: Mid-February 2001. (3)

Government Estimate: The government funding profile is presently estimated to be as follows (Note: Multiple awards may be made):, FY01 - \$8000K, FY02 - \$1000K, FY03 - \$700K, FY04-\$4000K. This funding profile is an estimate only and is not a promise for funding as all funding is subject to change due to government discretion and availability. However, it is also anticipated that there may be increases in the overall agreement amount and that the government funding to be made available to support this agreement would correspondingly increase. Thus, for white paper submission planning purposes, the following funding profile is projected:, **FY01 - \$4000K, FY02 - \$4000K, FY03 - \$4000K, FY04 - \$4000K.** () Notice to Foreign-Owned Firms: Such firms are

asked to notify the point of contact cited below upon deciding to respond to this announcement. Foreign contractors should be aware that restrictions might apply which could preclude their participation in this program.

(5) The Metals Affordability Initiative Consortium has an interest to focus this solicitation of white papers on the "Collaborative Design and Manufacturing " technical challenge. Thus, it is recommended that white paper teams focus their proposed effort on addressing the technical challenge "Collaborative Design and Manufacturing " as described in section B (Requirements) of this announcement. It is also recommended that white paper topics propose the utilization of modeling and simulation tools and techniques to meet the "Collaborative Design and **Manufacturing**" challenge and that proposed efforts are high risk / high payoff.

D-PROPOSAL (WHITE PAPER) PREPARATION INSTRUCTIONS:

- (1) General: Offerors submitting White Papers to the MAIC are hereby notified that all White Papers will be evaluated by representatives from all members of the MAI Consortium, as well as Air Force program managers, which together form the MAI/TOC. Thus, offerors shall not include trade secrets or privileged technical, commercial and financial information in the White Paper. The evaluation and scoring procedures of the White papers is described in the Proposal Evaluation Process (PEP) document, which is an attachment to the TIA, and included verbatim at the **Wright Research Site Contracting Office Home Page** previously indicated. Technical and cost sections of all White Papers must be valid for 180 days. In total, it is expected that there will be three sections to each White Paper: (1) Project Title; (2) Project Technical Plan and (3) Labor and Cost Summary, including plan for mandatory 25% (minimum) high quality company contribution (cost share). Sections 1 and 2 are to be included in the technical section of the White Paper and Section 3 will be in the cost section. White Papers shall reference that they are in response to the solicitation of the Metals Affordability Initiative. White Papers shall be submitted either in hard copy with an original and 15 (fifteen) copies or submitted via electronic and paper means, on either a 3-1/2 inch DOS-formatted floppy disks or CD-ROM in either Microsoft Word Version 7.0 or Rich Text Format

(rtf). If White Papers are submitted by electronic means, submit three (3) paper copies and three (3) electronic copies.

- (2) Project title: The following information shall be addressed by the offeror.

Project Title: _____

Company Name / Division : _____

Company Location: _____

Project team leader / Technical Point of

Contact: _____

E-Mail address _____; Phone: _____

Period of Performance: _____

Total Cost to Government: \$ _____

Total Company Contribution (Cost Share): \$ _____

- (3) Project Technical Plan: An overall technical description of the proposed effort is required; including (a.) a discussion of the technical work proposed, (b.) the development of a business case (i.e. return on investment based on either or both acquisition cost savings and operation and support cost savings), (c.) the development of how this proposed effort might reduce the time required to get the technology to market by cutting into development time, reducing time to first article, or reducing production lead time, (d.) a description of any performance impacts (e.) a description of the number of DOD systems or breadth of the metals industry which will benefit from this technology and (f.) a description of how and when the technology under development will be implemented.

- (4) Technical work proposed must be broken out into technical tasks.

Technical tasks are defined as follows:

Technical Tasks: An explanation of the technical tasks and work in sufficient detail to provide clear and quantifiable metrics for risk and decision making criteria along with a schedule showing definite decision, deliverable, and end points is required. The schedule should show a period of performance for all identifiable work tasks for all team members. The MAIC has adopted a technical approach format based on a Task-Gate process to manage risk and control cost.

A Task is:

- The period between gate reviews to gather the information needed to progress the project to the next gate.

- A period consisting of a set of parallel activities undertaken by people from different functional areas. These activities are designed to gather information and reduce project risk.

The structured MAI Projects Tasks are:

Task I - Concept

Task II - Feasibility

Task III - Business and Technical Investigation

Task IV - Testing and Validation

Task V - Implement Production

Task VI - Full Production

The White Paper itself may be considered to fulfill the requirements of the Task I - Concept, while the Task II - Feasibility may be a relatively low funding effort. The bulk of the MAI Projects should fall under Tasks III and IV and V.

- o Each proposed task will be reviewed at predetermined intervals not to exceed one-year and allowed to continue only after being subjected to a rigorous review of the exit- and entrance criteria (gates) associated with the major milestones of the project. A Gate is: A time to review the merits of a project based on:
 - Strategic fit
 - Technical risk
 - Financial impact
- A decision point to go/no go for a particular project.
- An opportunity to share "best practices" with project management.

Statement of Work (SOW): A SOW which outlines the specific work in each Task of the Project, and the organization and/or individuals doing the work is necessary. The SOW format shall be consistent with the format of the MAI SOW shown as an attachment to the Technology Investment Agreement (TIA), and at the previously indicated <http://www.wrs.afrl.af.mil/contract/> website.

Additional information, such as synopsis of prior work in this area, descriptions of available equipment, data or facilities vital to the effort, and resumes and time commitments of key personnel who will be participating in the effort might also be included as attachments to the technical White Paper and are not included in the page limit.

(5) Labor and cost summary, including plan for mandatory 25% (minimum) of the Project total cost, high quality company contribution (cost share):

The White Paper must summarize all labor and material costs for the project, and demonstrate a commitment to share the cost and risk of the

project with the government. Each White Paper should include the following:

- < A summary of all labor hours by team member; task, and fiscal year.
- < The quarterly cost to the Government by task and Fiscal Year over the projected period of performance.
- < A quarterly cost share by task and fiscal year over the period of performance, including details of the high quality cost share proposed by each team member is required. High quality cost share is defined as resources the non-federal participants will spend for man-hours, materials, new equipment (prorated as appropriate), subcontractor efforts expended on the project's SOW, and restocking the parts and material consumed, qualify as cost share. Cost share can include new IR&D effort, but only if those funds are to be spent on the SOW and are subject to the direction of the project management team.

(6)Page Limitations: Technical sections of all White Papers shall not exceed 10 pages (12 pitch or larger type), one and a half line spaced, single-sided on 8.5" x 11". Margins shall not be less than 1". If electronic means are used to submit the White Paper, it shall be readable by Microsoft Office products. The one and a half spacing requirement shall be satisfied by Microsoft Word's one and a half spacing method and the 12 pitch or larger requirement shall be satisfied by setting the Microsoft Word for Windows type size (point) at 10 or larger. The consortium will not consider pages in excess of the 10 page limitation for the technical section of the White Paper. There is no page limit on the cost section of White Papers. A conventional Cover (Title) Page will not be included in the page count.

E--BASIS FOR AWARD: Each White Paper shall be evaluated by all the members of the Technical Oversight Committee (TOC), per the criteria and the evaluation/scoring procedures described in the Proposal Evaluation Process ("PEP") document. The PEP is an attachment to the Technology investment Agreement (TIA) and is included verbatim at the **Wright Research Site Contracting Office Home Page** previously indicated. The TOC reserves the right to negotiate the scope of the proposed White Paper to accommodate and more equitably distribute available funding among proposals deemed worthwhile per the published criteria.

F--POINTS OF CONTACT:

MAIC:

MAI Program Office:

Program Business Integrator (PBI): Mr. Thomas Rupprecht, P&W,
860-557-1487, Fax (860) 557-8639; e-mail: rupprech@pweh.com

Program Integrator: (PI); Dr. Ramon A. Mayor, dba Raymar, Inc.
(under contract to Research Applications, Inc. and Pratt & Whitney)
561-694-0303, fax 561-694-0303, e-mail: raymarfl@aol.com.

Address for **overnight** mail packages is as follows: Pratt &
Whitney, 400 Main Street, East Hartford, CT, 06108 Attn: Thomas
Rupprecht, M/S114-45.

Address for **regular** mail is as follows: Pratt & Whitney, 400 Main
Street, East Hartford, CT, 06108 Attn: Thomas Rupprecht, M/S114-
45.

Air Force:

Technical program manager: Dr. Daniel J. Evans. , AFRL/MLLM,
(937) 255-9838, fax (937) 255-3007, e-mail:
daniel.evans@afrl.af.mil.

Grants Officer: Mr. Terry L. Rogers, AFRL/MLKM, (937) 656-9001,
fax (937) 255-6277, e-mail: terry.rogers@wpafb.af.mil

G MEMBERSHIP INTO THE METALS AFFORDABILITY INITIATIVE CONSORTIUM: The
Air Force maintains control over the size and composition of the Metals
Affordability Initiative Consortium. The following criteria have been
set forth by the Air Force as criteria to enter or exit the MAIC:

Criteria for Admission to the MAIC:

- 1) The Air Force will consider on an equitable basis any and all relevant and properly supported requests for the addition of new members to the MAI Consortium. Consideration will include the review and evaluation of the request and attendant supporting material and justification documentation. However, you are put on notice that to ensure efficient operational, procedural and decision-making capabilities, the Consortium shall be limited in size to a manageable level -no more than **16** industry members will be part of the consortium at the same time.
- 2) **Potential new Members must set forth a compelling business case for their admission that is consistent with the goals and objectives of MAI;**
- 3) **Potential New Members must accept conformance to all existing MAI Consortium operating and procedural requirements including but not limited to the MAI Collaboration and Technology Investment Agreements, and agree to the acceptance of relatively comparable financial terms and conditions**
- 4) **Potential New Members must present some core competency or technical capability impacting the affordability of metal components or the metals supplier base that is otherwise unavailable within the time scale of the scope of the program and/or is beyond the present technical capability, competency and expertise of the present consortium membership;**

5) Membership to the Technical Oversight Committee (TOC) - which evaluates White Papers - will be granted immediately after notification from the Air Force Research Laboratory that entrance to the MAIC has been approved and formal modification of the TIA. However, new Members will be subject to a one year probationary period prior to admission to the Executive Steering Committee (ESC).

Criteria for Exit from the MAIC:

Membership in the Consortium shall be terminated if a Consortium Member (whether a new member or existing member):

- 1) Does not participate in White Paper submissions and exhibits excessive absences from official meetings;
- 2) Demonstrates continual bias in White Paper evaluation as documented by Expert Choice Software;
- 3) Fails to propose participation in multi-member AIPTs;
- 4) Fails to meet minimum requirements for quality and amount of cost share.
- 5) Requests termination

Any offeror who wishes to submit a White Paper (and therefore join the MAIC or team on a White paper with a present MAIC member should access the above provided Web-site. Additional questions should be directed to the MAI Air Force Grants Officer indicated herein.